

Blockchain Based Fundraiser Application

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ABSTRACT

Crowdfunding is an online fundraising process that was first created to allow members of the public to contribute small amounts of money to support creative people's initiatives. Blockchain technology is used in crowdfunding to provide users with smart contracts. Because of this, we can provide crowdfunding in a safe, transparent, and secure manner. Creating interactive forms for campaign development and money contributions is the aim of this endeavor. Campaign creators and donors can use this system to see or submit requests for approval, as well as to build and support the campaigns. Furthermore, the donor might be able to track the use of the money they contribute.

All transactions will be recorded on the blockchain and stored as blocks. It is alluring to use smart contracts in blockchain. Without the aid of a trustworthy third party, a blockchain-based agreement must be negotiated, carried out, and enforced amongst unreliable participants. By utilizing Ethereum smart contracts on the crowdfunding site, this work aims to allay these worries by assuring that the initiatives may be added within the designated time limit, eliminating fraud, and allowing the contracts to be fully mechanically performed.

INTRODUCTION

Crowdfunding involves raising funds online from a group of individuals, often through dedicated platforms, to support projects or campaigns. It bypasses traditional financial institutions like banks, relying instead on the collective contributions of many people. This method has gained popularity due to its speed and accessibility, facilitated by social media and internet connectivity.

Participants in crowdfunding include contributors who donate money, platforms that host the fundraising campaigns, and project managers who oversee the projects. Depending on the model, contributors may expect different returns, such as interest on loans, dividends on investments, or simply the satisfaction of supporting a cause.

LITERATURE SURVEY

Numerous organizations are organizing fundraisers in response to the Covid-19 pandemic to assist local governments in securing new funding sources that will be allocated to the needy. For all the stakeholders involved in this fund-raising effort, platform service providers, and even fundraisers trust is a critical component. This time, the author attempts to examine the integration of blockchain technology and smart contracts into the prevalent crowdfunding process schemes. The study's findings suggest that the

prevalent crowdfunding process schemes can be integrated with blockchain-based smart contracts.

EXISTING SYSTEM

A comprehensive system for "Blockchain-Based Fundraiser Application" encompasses various technical components such as Blockchain Platform, Smart Contracts, User Interface (UI), User Authentication, Blockchain Explorer Integration, and Transaction Handling. However, the system faces several challenges including Blockchain Scalability, Transaction Costs, User Education and Adoption, Smart Contract Security Risks, Dependency on Internet Connectivity, and Centralization Risks. These limitations include issues like scalability hurdles in current blockchain technologies, volatility of cryptocurrencies affecting contributions, security risks associated with smart contracts, limited flexibility in contract adjustments, privacy concerns, complexities in integrating with traditional banking systems, high execution costs of complex smart contracts, limited dispute resolution mechanisms, and potential centralization risks within certain platform elements.

PROBLEM STATEMENT

This system has Blockchain Scalability issues leading to network congestion and slower transaction processing, the Volatility of Cryptocurrency impacting the value of contributions, Smart Contract Security Risks potentially exposing funds to vulnerabilities, Limited Smart Contract Flexibility necessitating complex processes for error correction, Privacy Concerns regarding user identities and regulatory compliance, and challenges in Integrating with Traditional Banking systems. Additionally, Smart Contract Execution Costs, Limited Dispute Resolution mechanisms, and Centralization Risks further impede the system's efficiency and trustworthiness. Addressing these limitations is critical for enhancing the functionality and reliability of blockchain-based crowdfunding platforms.

PROPOSED SYSTEM

The proposed system, "Blockchain- Based Fundraiser Application" presents a groundbreaking solution to the challenges prevalent in traditional online fundraising. By harnessing the capabilities of blockchain technology, particularly Ethereum smart contracts, the system aims to revolutionize the global crowdfunding market plagued by issues such as lack of control, fraud, and inefficiencies. Through an intuitive and secure online platform, campaign developers can seamlessly create projects using interactive forms, while donors can contribute funds confidently. The integration of Ethereum smart contracts ensures the autonomous execution of crowdfunding agreements, eliminating intermediaries and reducing fraud risks. Time-limited campaigns introduce urgency, and all transactions are securely recorded on the blockchain, ensuring transparency and tamper-resistant records. Embracing blockchain's decentralized nature, the system not only enhances security but also extends beyond cryptocurrencies, positioning itself as a sustainable and reliable technology for internet transactions. By fostering a trustworthy crowdfunding ecosystem where campaigns are meticulously controlled, fraud is minimized, and smart contracts facilitate efficient, automated, and secure transactions, the proposed system offers several advantages. These include enhanced security and transparency, smart contract automation reducing human errors, decentralization fostering trust among participants, global accessibility and inclusivity, and efficient fund tracking promoting accountability and trust between campaign creators and donors.

Security and Transparency

The utilization of blockchain technology ensures a high level of security by employing cryptographic techniques and decentralized consensus. Transactions are transparent and verifiable by all participants, reducing the risk of fraud and providing a tamper-resistant record of all crowdfunding activities.



Smart Contracts

The integration of Ethereum smart contracts automates the execution of crowdfunding agreements. This feature streamlines the entire process, eliminating the need for intermediaries and ensuring that campaigns adhere to predefined rules. Automated contract execution enhances efficiency and reduces the potential for human error.

Efficient Fund Tracking

The system provides a transparent and immutable record of all transactions on the blockchain. Donors can easily track the progress of the funds they contribute and gain insights into how those funds are utilized by campaign developers. This level of accountability fosters trust between campaign creators and donors, enhancing the overall credibility of the crowdfunding platform.



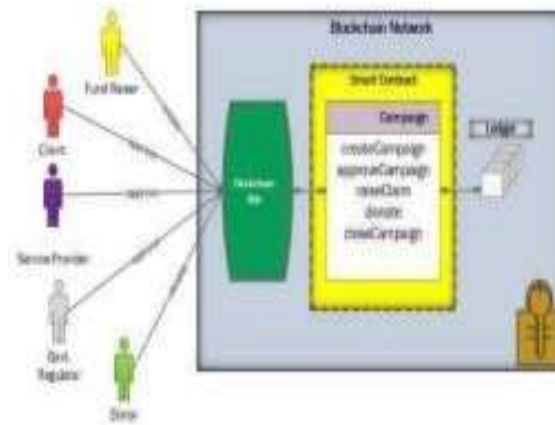
Global Accessibility

Users from around the world can participate in campaigns without the traditional barriers associated with cross-border transactions. This global accessibility broadens the reach of crowdfunding initiatives, allowing for a more diverse pool of contributors and campaigns.

SYSTEM ARCHITECTURE

A system architecture is a conceptual model that defines the structure, behavior, and views of a system. An architecture description is a formal description and representation of a system. Organizes on

a way that supports reasoning about the structure and behavior of the system. A system architecture can consist of system components and the sub-systems developed, that will work together to implement the overall system. Object to implement the identified requirements. It is the process of defining components, interfaces, objects, classes, attributes and operations that will satisfy the required element.



FUTURE ENHANCEMENTS

One avenue for improvement could involve enhancing the scalability of the blockchain platform to accommodate a larger volume of users and transactions seamlessly. This could involve exploring innovative scaling solutions or migrating to more scalable blockchain technologies. Additionally, advancements in smart contract security protocols could bolster the system's resilience against potential vulnerabilities, ensuring the safety of funds and transactions. Integration with emerging technologies such as decentralized identity solutions could enhance user authentication and privacy, addressing concerns regarding pseudonymity and regulatory compliance. Moreover, incorporating features for real-time dispute resolution mechanisms could provide users with greater confidence and transparency in the crowdfunding process.

CONCLUSION

Blockchain-based smart contracts are ideally suited for use in the three primary crowdfunding schemes. Blockchain fosters more trust, and smart contracts also quicken crucial fundraising procedures. If businesses use their resources to build intelligent contracts based on blockchain technology, it will cost much money. Cryptocurrencies are frequently used by companies that offer intelligent contract services, but not all governments officially sanction their usage. Therefore, the community is unaware of crowdfunding's usage of blockchain technology. As a result, we created a user-friendly app for average males. Nevertheless, that is not all. Due to the development of blockchain technology our application has a bright future and lots of room for growth and development. It will take some time before Ethereum-based decentralized applications (Dapps) are widely recognized and embraced by the community because the world is still adapting to blockchain technology and cryptocurrencies. After understanding the concept of blockchain, people will turn to blockchain-based crowdfunding platforms.

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